NLC Conventional Facilities Overview

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Conventional Facilities Topics

- Address Previous MAC Report
- CF Goals for FY’03
- CF Progress for FY’03
- SLAC/Fermi Work for FY’03
- Support of USLCSG Siting and Conventional Facilities Task Group
Address Previous MAC Report

- “an active role of CF in the overall project scheduling effort....”
- “The requirements on the CF information to support an international decision on physics technologies needs to be postulated, if not known.....”
- “A bottoms up cost estimate.....”
- “structure an NLC estimate to make direct comparisons to TESLA more meaningful.....”
Address Previous MAC Report

- “Configuration Management…..”
- “Continue to develop graphic presentations…..”
- “The NLC project and the CF need to prepare representative construction schedules…..”
CF Goals for FY’03

- Continue to Pursue NLC Design Solution at CA Copper Mountain Site
- Investigate NLC Design Solution at IL DeKalb Site
- Continue to Work toward Consistent Cost Estimating Formats to Provide Useful Comparisons
- Continue Project Scheduling Efforts in Support of Overall Project Scheduling Effort
- CF Efforts have been Adjusted to also Meet the Requirements of the USLCSG (United States Linear Collider steering Group)
Conventional Facilities - Machine Advisory Committee Review

**Deliverables for USLCSG**

- A Report from the Accelerator Subcommittee of the USLCSG is Due in September, 2003
- **Individual Design Summaries will be Provided for** each Representative Site Solution – CA Warm, CA Cold, IL Warm, IL Cold and IL Cold Single Tunnel*
- **Two Sets of Drawings, Cold and Warm**
- **Cost Estimates will be Provided for Each Representative Site Solution**
- **An Executive Summary of All Work will be Provided as Needed and Defined by the Accelerator Subcommittee**
- **Written Evaluation of One Tunnel vs. Two Tunnel**
Current Resources

- At SLAC 4.5 FTE’s with Limited Support from Parson’s/Brinkerhoff, LAI and DMJM
- At Fermi 2.1 FTE’s on Internal Chargeback Supported by 3.5 FTE’s from Hanson Engineering and 1.0 FTE from Patrick Engineering
- Comprehensive Report on Tunnel Costs is Being Prepared through Hanson Engineering
- Also Exploring Support form NIU Geology Department for Rock Characterization in the DeKalb Area
Current Progress

- CA Warm – Draft Design Summary, Drawings and Cost Estimate Complete*
- CA Cold – Work is Underway
- IL Cold – Draft Design Summary, Drawings and Cost Estimate Complete*
- IL Warm – Work is Underway
- Initial Draft Project Schedule for a Generic Warm Design Solution has been Completed
- IL Cold Single Tunnel – Resource Dependent

*As New Criteria is Finalized, Document Packages will be Updated
Consistent Cost Estimates

- **Two Formats have been Generated for Cost Estimating**
- **The JAVA Format is used for Overall Machine Costing which Distributes CF Costs to Individual Parts of the Machine**
- **The CF Group Will Still Maintain EXCEL Spreadsheets for Each Design Solution**
- **Currently the CA Warm Estimate and the IL Cold Estimate are in Both Formats**
Configuration Management

- The USLCSG is Working to Produce Reference Design Configurations for Both the Warm and Cold Machines
- The Conventional Facilities will use these Configurations for the Warm/Cold Design Solutions in CA/IL
- This Should Provide a Level of Configuration Management for the Overall Effort
- CF Believes We Now have the Proper Direction to Support the International Decision Process for a Linear Collider
Schedule Through ‘03

- 6/15/03 - General Task Group Review
- 7/31/03 – IL Warm and CA Cold Solutions in Draft Form with Proposal for Executive Summary Ready for Internal Task Group Review
- 8/15/03 – All Design Summaries, Drawing Sets and Cost Estimates for CA Warm/Cold and IL Warm/Cold and Executive Summary Complete and Ready for Accelerator Subcommittee Review
- 9/1/03 – One Tunnel vs. Two Tunnel Draft Complete
- ? – One Tunnel Design Solution May Require FY‘04 Funding
- Aug/Sept – Incorporate Comments and Finalize Deliverables
In Conclusion

- **The CF Group Continues to Provide Consistent Effort in Support of the NLC R&D Plan**
- **Although additional Design Solutions are Being Pursued, All Work Should Prove Useful to the International Decision Process**
- **Project Scheduling Effort is Well Underway**
- **CF Work Will Continue to Refine the Documentation it Provides Through the Technology and Hosting Decision Process**